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Fw: Brochure on Big 4

Friday, March 14, 2008 1:59 PM

From: "Hernandez.Kathryn@epamail.epa.gov" <Hernandez.Kathryn@epamail.epa.gov>
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scan0004.jpg (1609KB), Big 4 Mill[1].doc (47KB), scan0001.jpg (1987KB), scan0002.jpg (1932KB), scan0003.jpg (1981KB)

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03/14/2008 01:53 PM	cc	"Marshall, Bruce" <Bruce.Marshall@tetratech.com>
	Subject	RE: Brochure on Big 4

Sorry - I forgot - Attached is the information we have. The Word document, I believe is a summary put together by someone at Summit County and the jpg files are the Mining Review Article.

Daryl

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-----Original Message-----
From: Hernandez.Kathryn@epamail.epa.gov
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Subject: Brochure on Big 4

can you send it to me?

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(See attached file: scan0004.jpg)(See attached file: Big 4 Mill[1].doc)
(See attached file: scan0001.jpg)(See attached file: scan0002.jpg)(See attached file: scan0003.jpg)

$5.50 per ton, or $5,500,000, and the company, in their handling and treatment, expects to make a net profit of $2 per ton, or $2,000,000.

The affairs of the company are well and ably managed by men of long experience and of successful records in the mining industry. The company is capitalized at 500,000 shares. The officers and directors are Morris P. Kirk, president; John H. Leavell, vice-president; John Pingree, secretary and treasurer; L. R. Eccles, W. H. Eardley, E. B. Critchlow and F. D. Randall. L. R. Davis is mill superintendent, and M. P. Cloonan is mill foreman. Main office, Newhouse block, Salt Lake City.

OWNERSHIP OF MINE EQUIPMENT.

A development company holding an option to purchase a Montana lode-mining claim hired an electric hoist from plaintiff at an agreed monthly rental of $50, and the hoist was installed at the mine and used. The development company having forfeited its right to purchase the claim, the mining property was sold to defendant, who refused to surrender the hoist, claiming that it had become a part of the real estate purchased by defendant. Suit brought to recover possession lately terminated in plaintiff's favor, as shown by the decision handed down by the Montana Supreme Court in the case of Montana Electric Company vs. Northern Valley Mining Company. (155 Pac. Rep. 1017.)

The court holds that the question whether mining equipment installed at a mine becomes a part of the real estate or retains its character as chattle property is primarily to be determined by the intention of the parties to the contract under which the installation was made. Here it is held that intention to make the hoist a part of the real estate was negatived by the understanding that it should be returned to plaintiff when the period of hiring terminated. The fact that the hoist was placed upon a substantial foundation and an engine house constructed over it did not prevent it from being removable as a chattel, it appearing that that could be accomplished without material injury to the realty.

Whatever may be the rights of an innocent purchaser of a mine to assume that equipment affixed to the land was intended to become a permanent part thereof, it is held that in this case defendent was deprived of any such rights by reason of the fact that notice was imparted to defendant's promoter and chief stockholder and principal officer before defendant bought the mining property, disclosing plaintiff's interest in the hoist.

H. Simpson, a prominent mining promoter of Rochester, Nevada, was in Salt Lake recently.

Large Production from Utah Mines

An interesting table of production of the mines of Utah has just been published by the United States Geological Survey. A total of 234 producers in twenty counties of the state shipped 10,451,445 tons of ore during the year 1915, valued at $55,105,070. This compares with a total of 8,544,014 tons from 211 properties during the preceding year, and valued at $37,151,593. Salt Lake leads the other counties of the state by a big margin, having produced practically 73 per cent of the total valuation during 1915. The figures from this county are 9,718,002 tons from 67 producers, valued at $40,126,857. Juab county is second with 284,783 tons, value at $5,555,478, from forty-three producers, and Summit county third with 193,554 tons, valued at $4,063,685, from fifteen producers. The lowest in the list is Grand county, from which one producer shipped two tons of ore of a total valuation of $110. One producer in San Juan gives that county a production of $125 for the year.

The following is the table from the survey, the figures for gold and silver including the small placer production:

County	No. of producers	Ore treated	Gold	Silver	Copper	Lead	Zinc (spelter)	Total value
		Short tons	Fine ounces	Fine ounces	Pounds	Pounds	Pounds	
Beaver	23	53,814	630.23	279,694	428,916	$,589,416	2,989,811	$ 1,004,333
Boxelder	3	7,014	.....	47	328,630	38,458	2,482,578	367,182
Cache	2	41	.....	.....	102	.....	16,895	2,113
Emery	1	149	.....	125	166	262	59,075	7,429
Garfield	3	1	28.15	13	750	.....	.....	720
Grand	1	2	.48	30	428	.....	.....	110
Iron	2	867	160.36	5,620	.....	.....	.....	6,164
Juab	43	284,783	44,038.38	4,005,600	5,371,534	29,406,612	2,356,086	5,555,478
Millard	1	39	44.41	82	968	.....	.....	1,129
Morgan	1	108	.....	424	228	48,591	.....	2,535
Piute	4	192	1,617.52	2,775	1,345	3,231	.....	35,231
Salt Lake	67	9,718,002	121,752.33	3,152,267	176,936,034	92,310,646	5,721,022	40,126,857
San Juan	1	.....	6.00	2	.....	.....	.....	125
Summit	15	193,554	3,564.32	3,108,328	1,812,260	38,391,113	2,359,306	4,063,685
Tooele	37	111,891	746.57	732,083	2,257,204	16,604,954	1,198,172	1,710,616
Uinta	3	6	12.19	27	5,724	.....	.....	1,268
Utah	18	10,934	747.54	379,176	14,476	3,614,989	1,697,251	590,591
Wasatch	4	69,788	643.34	646,270	474,912	10,959,264	5,412,044	1,610,246
Wash'g'n	4	238	598.83	600	35,568	.....	.....	18,907
Weber	1	22	.....	22	1,943	.....	.....	351
Total, 1915.	234	10,451,455	174,590.65	12,313,295	187,671,188	199,967,437	24,292,249	$55,105,070
Total, 1914.	211	8,544,014	157,961.16	11,154,916	152,034,002	171,323,137	15,989,267	$37,151,593

THE SILVER KING COALITION.

Wonderful indeed is the Silver King Coalition, says the Record, Park City, Utah. Without fuss or display work it proceeds uninterruptedly, resulting in a regular, steady tonnage, with new finds of high grade ore no uncommon thing. Superintendent James Humes is doing excellent work and the property is getting bigger and richer apparently as extraction increases. Silver and lead were always in abundance, but it will not surprise those familiar with certain portions of this marvelous producer to have gold added to its production in large quantities. The past week ore was taken from comparatively virgin territory showing values running as high as 188 ounces in silver, and 20.2 ounces in gold. This will be laughed at by many, but it is nevertheless a fact. Gold values are obtained nearly all the time from these workings, combined with high silver values—but the assay above given is out of the ordinary. Wonderful things are happening underground at the King Coalition which never finds its way in the public prints, because of the non-publicity policy of the conservative management.

Jas. E. Berkeley, of Salt Lake, secretary of the Gemini Mining Company, has returned home from a three weeks' vacation in California.

Big 4 Mill

A number of milling operations were established where water and tailings were available to take advantage of the fact that early milling operations were innefficient and overlooked large values of metals. As technology advanced, it became profitable to rework those finely ground waste products and some say there are even now profitable gold values to be extracted from tailings below Park City.

Silver Creek, later known as Poison Ditch, washed tailings down from the mills located closer to the mines. The pioneer effort was the **Beggs Milling Company**, located where Prospector Park Pond is now[1]

The **Beggs Milling Company** plant is located about one-half mile below the Broadwater mill. It is the pioneer milling company operating on the tailings carried down by the creek from the mines. This plant has operated successfully during the greater part of the year."[2]

"The American Flag interests bought the **Grasselli Chemical** Company's mill, located on the north side of Park City; a mill that cost the Grasselli Chemical Company about $100,000, and which was comparatively new, and remodeled it last summer for the treatment of American Flag ores. But, owing to the low price of silver the chief constituent of the American Flag ores, the mill was kept in operation but a short time.[3]

"At the **Park City Mills Company**, operating the old **Grasselli** plant mill, a 35-ton Dern-Holt roaster was installed. This mill was remodeled and enlarged to treat ores from the American Flag mine as well as low-gade ores from other mines of the district."[4]

*Did Grasselli lease to **Broadwater** and sell to **Park City Mills** or was **Park City Mills** in operation only one year? Read on:

Spiro tunnel, planned to extend 14,000', was commenced in the summer of 1916 and is going at the rate of 300'/month. **King Con**: "The company's new mill was originally the plant of the **Grasselli Chemical Company**. It was enlarged and remodeled during the summer, and in the early fall the new machinery was put in. It consists of standard crushing and grinding machines, concentrating tables, a ball-mill and oil flotation equipment. It is of fifty tons daily capacity and is so designed that more units can be added as needed after the new tunnel enters the ore-bearing formatin. Concurrently with the building of the mill, the company constructed an aerial tramway 10,200 feet in length, extending from the workings at the mine to the new plant. The tram carries fifty-two buckets, each of five cubic feet capacity, and moves at the rate of 400 feet per minute, giving it a carrying total of twenty tons an hour or 480 tons a day. The company saves 75% of the original cost of shipping by wagon, and more than 85% on the cost of up-

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[1]Conversation with Ray Wortley.

[2]Williams, F.T., *The Salt Lake Mining Review*, January 15, 1916, p. 96.

[3]Moore, Charles, *The Salt Lake Mining Review*, January 15, 1914, p,. 49.

[4]Williams, F. T., *The Salt Lake Mining Review*, January 15, 1916, p. 95.

freight, besides the inestimable value of being able to keep its transportation system open both winter and summer."[5]

"The **Broadwater Milling Company** has erected a modern 500-ton mill to recover the values from a 450,000-ton zinc-lead-silver tailing accumulation just north and below Park City. Theis company secured its lease from the Grasselli Chemical Company of Cleveland, Ohio. The mill has been tuned up, all necessary alterations made and is now said to be turning out concentrates of a sufficient tenor to make the venture a success."[6]

"At the **Big Four Exploration Company's** property a 250-ton mill was erected to treat a 1,000,000-ton zinc-lead-liver tailing accumulation seven miles below Park City near the Union Pacific railroad tracks. The reported average value of the tailings is $5 per ton. A boarding house, bunkhouses, residences, and an office building have been erected and the mill is in successful operation."[7]

East of Park City at the Union Pacific Station of Atkinson was the huge **Big Four Exploration Milling Company** plan. It began operation in July, 1916 and operated on tailings from the Ontario, Marsac and Anchor mills which had washed down Silver Creek from their operations in the past.

> "These tailings on Atkinston Flat, according to measurements and estimates, cover an area some three and one-half miles in length and range from 400 to 1,200 feet in width, the average being from 600 to 800 feet. The deposit ranges from a few inches to about eight feet in depth with an average of about thirty inches. These tailings deposits, accoring to actual measurements, contain over a million tons that are theoretically available and recoverable, the average gross value, indicated by extensive sampling and assaying, being 4.17 per cent zinc, 1.6 per cent lead, 3.2 ounces silver, 30 cents in gold and 2.5 per cent iron, making a total value of $11.33 per ton at present metal quotations: or there are in the neighborhood of $11,000,000 in these tailings which excaped recovery in the milling practice of years ago. "[8]

"The Big Four Exploration Company, at that time controlled by Kirk & Leavell, well known construction engineers of Salt Lake, placed its big 750-ton mill at Atkinson, seven miles below Park City, in commission during the summer. A complete description of this plant was given in the issue of August 30th of The Mining Review. It was designed to handle over 1,000,000 tons of tailings from the great mills of the camp, and gave satisfactory extraction of values from the start. The great dumps of tailings are estimated to contain values of about %5.50 per ton in zinc, lead gold and silver, and the estimated profits are figured at $2 a ton, making the net value of he dumps above $2,000,000.

Control of the **Big Four Company** passed late in the year to interests closely associated with the United States Smelting Company. New directors elected at that time included W.H. Eardley of Kansas City, Missouri, who was made vice-president and general manager. He is manager for the United States Company in the Kansas, Missouri, and Oklahoma field. S.A. Block was made auditor, and P.E. Coyle, E.P.Thompson and L.B. Davidson, all of Boston and all associated witht he big smelting corporation, were made directors. The new owners have already enlarged the Atkinson plant to a capacity of 1,000 tons a day. Other properties owned and under development by the Big Four are the

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[5]Ireland, Jerome B., *The Salt Lake Mining Review*, January 15, 1917, p. 27.

[6]Williams, F.T., *The Salt Lake Mining Review*, January 15, 1916, p. 96.

[7]Williams, F.T., *The Salt Lake Mining Review*, January 15, 1916, p. 95.

[8]*The Salt Lake Mining Review,* Vol. 18, No. 10, August 30, 1916, p. 13-

Queen of the Hills Mine near Stockton, Utah, the Tres Hermanos mine, Columbus, New Mexico, the Chinatti mine (leased) at Shafter, Texas and big slag dumps near Ketchum, Idaho. The company paid two dividends of 5 cents a share or $40,000.[9]".

"The **Moore Milling Company,** operating two small mills on the creek, has had a successful year. This company handles its tailings direct from the mills before they have had an opportunity to settle permanently."[10]

Beggs-Miller Mill at the **Grasselli Zinc Plant** was completed to work tailings by a process invented by Miller. **Beggs** closed his concentrating plant on the creek.[11]
The **Broadwater Mill** on the flat below town. Can't find enough teamsters. Supt. Miller says the Broadwater plant is nearing completion.[12]
The three week test of the **Broadwater Mill** is completed. M.H. Kuryla. The big mill will be overhauled to work 5 years worth of stockpiled tailings.[13]
On the flat below town a small town is being built by **Broadwater** people with carloads of lumber by Park City Lumber for erection of the mill. 5 yrs. worth of tailings were leased.[14]

[9]Ireland, Jerome B., *The Salt Lake Mining Review*, 18:27-2, January 15, 1917, p. 27.
[10]Williams, F.T., *The Salt Lake Mining Review*, January 15, 1916, p. 96.
[11]*The Park Mining Record,* December 23, 1911 (check 1911, but it might be 1915, I just can't read it)
[12]*The Park Mining Record,* September 25, 1915
[13]*The Park Mining Record,* September 15, 1916.
[14]*The Park Mining Record,* August 7, 1915.

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THE SALT LAKE MINING REVIEW

ESTABLISHED APRIL 1st 1899.

VOL. 18. No. 10 SALT LAKE CITY, UTAH, AUGUST 30, 1916 SINGLE COPY, 15 CENTS

New Milling Plant of Big Four Exploration at Park City

By Will C. Higgins

The milling plant of the Big Four Exploration Company, located at Atkinson, a station on the Union Pacific seven miles below Park City, Utah, went into commission during the middle of the present month and, so far, most gratifying results have been obtained in its operation; while, already, the company has begun the regular shipment of concentrates to the Salt Lake lead smelters and the Kansas zinc smelters, and everything points to successful and profitable operation for a number of years to come.

The Big Four Exploration Company of Salt Lake City, which is so successfully operating in various portions of Utah and of the west, has an abiding faith in the ultimate and profitable outcome of this Park City enterprise; and, one might say, it "storms with pride" to the splendid results which are being achieved now that the company's big milling plant, which is among the third largest in the state, is responding so satisfactorily to skilled management and which, in the near future, will be working up to full rated capacity, or in the neighborhood of 800 tons per day.

The Atkinson Flat Tailings.

The Big Four Company, in its Park City milling undertaking, is really engaged in a manufacturing business upon a large scale, with hardly a feature connected with it that is of a speculative nature, for with its raw material practically in sight, and in form and condition so that it can be measured up and blocked out and an accurate estimate made as to tonnage and intrinsic value, all that remains to do is to provide facilities for the economical and profitable handling of this product so that it can be reclaimed from a condition of seeming waste and loss and transformed into a commodity that commands a welcome in any mart, in any place where commerce and trade go hand in hand with progress and civilization.

This raw material that the Big Four company is whipping into a finished commodity of value consists of the great mill tailings deposits at Atkinson Flat on Silver Creek; seven miles below Park City, and about twenty-eight miles from Salt Lake.

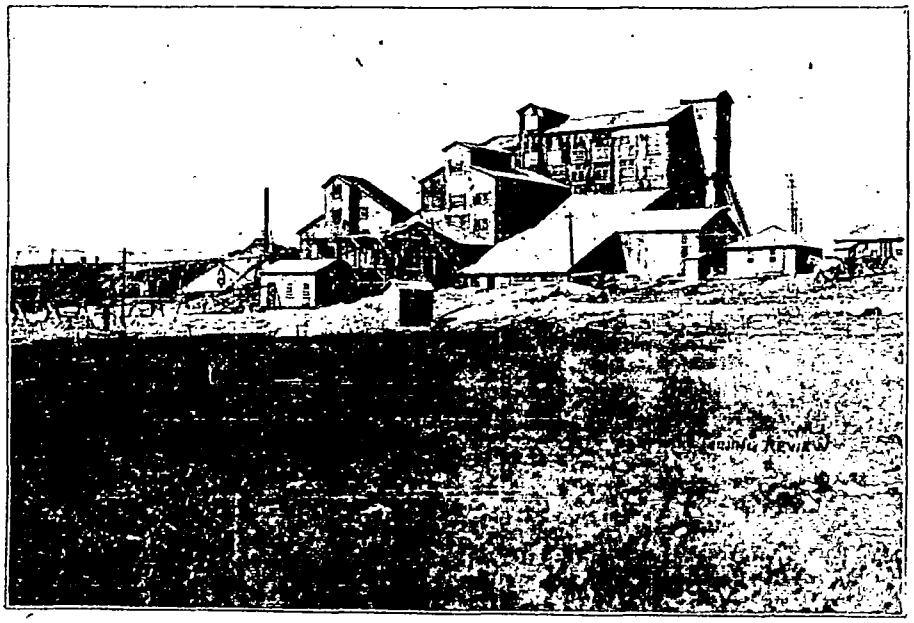
These tailings represent the accumulation of many years of mill opeartions by mining companies of Park City; years when milling practice had not attained that stage of perfection obtaining at the present time, and when the recovery of silver and lead values ran so low as to permit of great loss to the mine and mill operator, and when the "cursed" zinc was purposely allowed to escape in the tailings because of the little demand for this product and because of the penalty imposed by the smelters when this metal exceeded a certain percentage in the mill returns.

Big Four Exploration Company Mill, Showing Stock Pile and Waste Discharge. (Photo by Will C. Higgins.)

The Old Ontario and Marsac Mills.

The tailings accumulation on Atkinson flat, if they could give audible expression as to the cause and manner of their existence, would be able to talk interestingly of the operation of the old Ontario chlorination mill, the old Marsac plant and the Anchor mill, all three of which contributed, very largely, to these tailings deposits, which now bear silent testimony to the wonderful

activity prevailing in Park City mining and milling operations more than a generation ago when, beyond a peradventure of doubt, the most advanced in metallurgy and milling practice never dreamed that the day would come when these vast accumulations



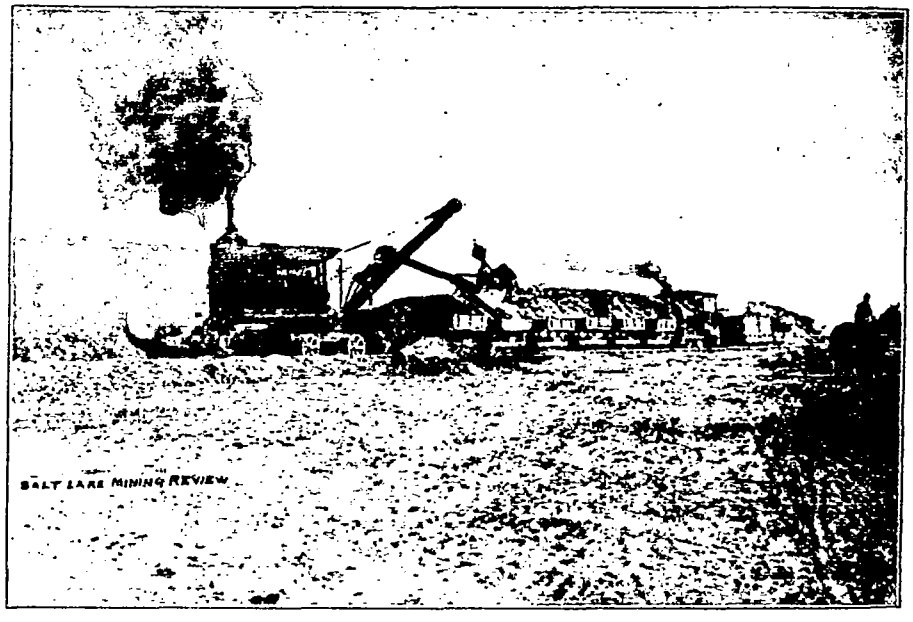
Side Elevation of the Milling Plant of Big Four Exploration Co. (Photo by Will C. Higgins.)

of tailings, already mined, ground and stored, could be profitable re-treated within so short a period.

These tailings on Atkinson Flat, according to measurements and estimates, cover an area some three and one-half miles in length and range from 400 to 1,200 feet in width, the average being from 600 to 800 feet. The deposit ranges from a few inches to about eight feet in depth, with an average of about thirty inches. These tailings deposits, according to actual measurements, contain over a million tons that are theoretically available and recoverable, the average gross value, indicated by extensive sampling and assaying, being 4.17 per cent zinc, 1.6 per cent lead, 3.2 ounces silver, 30 cents in gold and 2.5 per cent iron, making a total value of $11.33 per ton at present metal quotations; or there are in the neighborhood of $11,000,000 in these tailings which escaped recovery in the milling practice of years ago. These tailings deposits were secured, sometime ago, under working lease, by the Big Four Exploration Company which, during a period of nearly a year, has conducted experiments and solved the many problems pertaining to their successful retreatment, and this enterprise is now fairly under way with success so seemingly assured that it is only a matter of a few months before profits will be reflected in regular dividends being disbursed by the company.

From Sod to Concentrate.

The operation of the company, on Atkinson Flat, is seemingly nothing more than "Mining the Meadows," for, before work was inaugurated the tailings deposits were grass-grown, and cattle grazed thereon; now, however, beginning with plow and scraper, steam shovel and steam transportation, a transformation is rapidly taking place, and the farmer can no longer recognize his field or mow his hay in harvest time, for another kind of harvest is being garnered.



Big Four Exploration Company Steam Shovel Loading Tailings on Train from Winrows. (Photo by Will C. Higgins.)

For several months the company has been engaged in making a recovery of these vast tailings. Beginning at a point well above the mill, say three-quarters of a mile, the mineral-bearing waste has been swept into winrows by means of plow and scraper at a cost of 3.5 cents per ton. Between the scene of present operation and the new milling plant a narrow gauge railroad has been constructed. At the winrows a steam shovel is almost constantly in action, loading the train of cars, and it is estimated that the cost of handling by steam shovel and by train to the mill is in the neighborhood of 6.3 cents per ton. Conveyed to the milling plant the pay dirt is dumped into the mill bin for immediate treatment, or stored in the stock dump for winter handling.

The Big Four Mill.

The Big Four mill, now so successfully engaged in the handling of Atkinson Flat tailings, is reputed to be the third largest, in point of daily capacity, in the state. As originally rated, it could take care of 750 tons of tailings daily. At the present time over 700 tons are being treated, and it is confidently believed that by making a few changes and alterations, its capacity can easily be brought up to 1,000 tons every twenty-four hours. The plant is modern and up-to-date in every essential and in every department, and some of the ideas evolved and employed in milling practice are modern to a degree and, therefore, necessarily successful and profitable. The method employed is purely a dressing of the tailings and the division of their mineral content into two separate products—a zinc concentrate and a silver-lead concentrate. The mill is several stories in heighth, and the machinery equipment is such that all material is treated by gravity once it is hoisted, by elevator, to the mill bin that feeds to the big trommels, and economies are

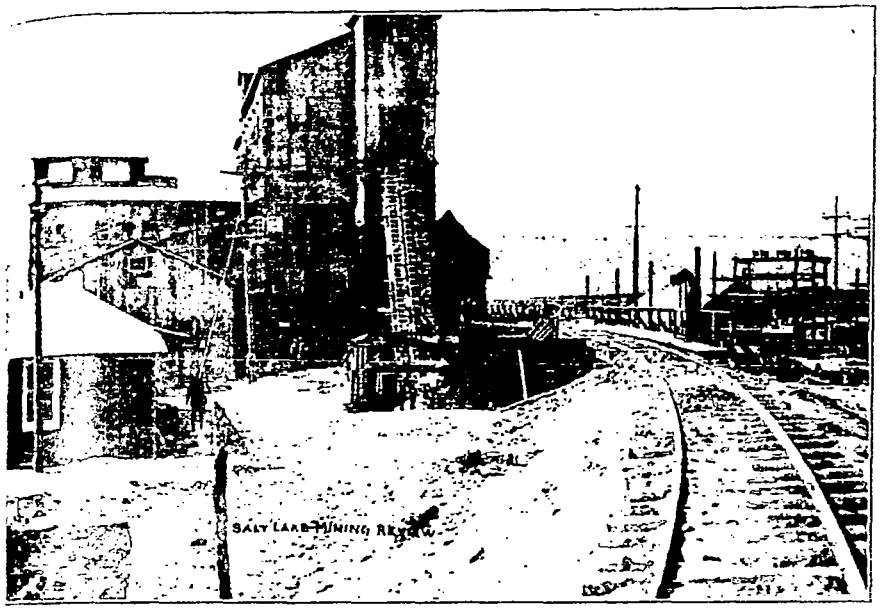
...duced to such a degree that the entire ...eeds but five or six men to care for ...eeds of its operation.

Milling Practice.

After being elevated to the 1,000-ton bin ...the top of the mill the feed or "tailings" ...s to ten hydraulic feeders and thence ...No. 2 elevator. From the elevator it is ...d to two 4x12-foot trommels, two sections ...which are of six-mesh while a third is of ...ee. From the trommels the material is ...erted to minus 6-mesh Esperanzas, plus ...esh to minus 3-mesh to four 3-compart...ent Hartz jigs, and the plus 3-mesh is ...arged as waste.

The minus 6-mesh goes to the Esperan...s for desliming, the slimes going to a 26x ...Dorr thickener and the sands to four 16-...h duplex Callows.

The plus 16-mesh from the Callows are ...veyed to four double-deck No. 9 Wilfleys.



Milling Plant Big Four Exploration Company Showing Grizzlies, Belt Conveyor and Elevator. *(Photo by Will C. Higgins.)*

...e tails go to waste and the rougher con...trates to the ball mill for regrinding; ...ence to the finishing tables. The under...e of the Callows go to two mechanical ...lp distributors and thence to twelve No. ...double deck Wilfleys. The rougher con...trates go to the finishing tables; the sec...d cut to laundry roughers for retreatment; ...d the tails to waste.

All rougher concentrates go to elevator ...rough six spigot Kirk & Leavell classifiers ...x No. 5 Wilfleys and four Deister-Over...m fine sand tables for finishing. The ...d and iron goes to a shaking launder and, ...sing to the dewatering drag, is convey...to the ore bin. The zinc concentrate goes ...shaking launder, to the dewatering ...z and to the bins. Thickened slimes ...the Dorr thickener go to ten Deister-...strom slimers, giving a finished silver-lead concentrate and a zinc middling. Middling to two D. O. finishing slimers.

Equipment of the Plant.

The equipment of the plant is complete and is practically meeting all requirements, but later on oil flotation will be added to the milling practice. Out on the tailings dump there is a Bucyrus 18-B revolving type traction wheel, 1¼-yard dipper steam shovel, two fourteen ton steam dinky locomotives; eleven six-ton, side-dumping contractors cars, and fifteen 2-ton cars of the same type; eighteen 21-cubic foot Western Fresno scrapers, ten Western slip scrapers; two disc harrows, and, at the present time, three-fourths of a mile of narrow guage railroad.

The unloading equipment of the mill at the present time consisting of unloading hoppers or grizzlies; three 30-inch pan feeders, 30-inch belt conveyor, and elevator of continuous bucket type.

Two Gates type trommels with punched plate one-inch round holes.

Six trommels.

Two Esperanza drag classifiers.

Four duplex Callow screens.

Three mechanical pulp distributors.

Four Hartz type roughing jigs, three compartments each.

Sixteen double-deck No. 9 Wilfley roughers.

Sixteen No. 5 Wilfleys.

Sixteen Deister-Overstrom slimers.

One Allis-Chalmers 5x4 ball mill.

One 4x3 Marcy ball mill.

One 6-spigot Kirk & Leavell classifier.

Five Byron Jackson lined centrifugal slime pumps.

Two Goulds type centrifugal pumps.

One Goulds 7x8 triplex pump.

Three Dorr thickeners; 14x10, 26x10, 12x10.

One 100-horsepower Westinghouse motor.

Three 50-horsepower General Electric motors; two 75-horsepower and one 25-horsepower motors of the same make.

Three 30-horsepower Wagner motors.

Four Allis-Chalmers motors of 40, 15 and 10 horsepower.

One 7½ and two 5 horsepower General Electric motors.

The machine shop is equipped with lathe, power drill press, pipe and belt threading machine, cut-off saw, circular saws, key seating machine and other necessary tools.

The laboratory and assay office is well equipped for economical and perfect work.

The Settling Pond.

The settling pond, from which the water supply for mill purposes is derived, is fed through a ditch and flume. This pond is 100 feet in diameter by four feet in depth, and is rated to hold 200,000 gallons of water. From the pond the water flows by gravity to the pump station where it is raised, by Gould pumps, against a head of between 75 to 100 feet, to the top of the mill and into the storage tanks.

The Stock Pile.

The company management, and very wisely, be it said, is making provision for winter operation; and this is necessary inasmuch as, for four months of the year the snow will be so deep on the "meadows," and the cold so severe, that it will be next to an impossibility to plow and scrape the tailings, and keep the steam shovel in constant service. To obviate this formidable condition a great stock pile is being daily added to at the mill, and this stock pile, during the winter months, will be worked by steam shovel much the same as operations are carried on during the summertime. At the present time two trains are employed in hauling tailings from the field to the mill and stock pile, and another one is to be added at an early date. These two trains are now delivering 1,800 tons of tailings daily to mill and stock-pile, 700 of which are taken care of by the former. The stock pile now contains over 50,000 tons of tailings. This constitutes a two-months' supply for the milling plant, and another 50,000 tons will be added as speedily as possible so that the four months' enforced idleness in the field may not be lost in the operations of the company.

Daily and Monthly Earnings.

The company is now treating on an average of 700 tons of tailings daily with a recovery of about 60 per cent of the zinc, 40 per cent of the lead, and 35 per cent of the gold and silver content of the material handled; resulting in a net earning, daily, of $1,400; monthly, of $42,000, and yearly of $504,000.

At the lowest metal quotations the 1,000,000 tons of tailings contain a gross value of